INTRODUCTION

Acute pancreatitis is an acute inflammation of the pancreas is an increasingly common abdominal disorder presenting as major surgical challenge to general surgeons worldwide. It is a complex process which varies from mild self limiting inflammation to rapidly deteriorating condition which poses a serious threat to life. Acute pancreatitis has incidence of around 2.29%. Based on severity, acute pancreatitis can be acute edematous; acute persistent; or acute hemorrhagic necrotizing. Early identification of patients at risk of developing a severe attack has great importance for instituting therapeutic interventions and improved outcome.

About 10 to 20% of patients experience a severe attack of acute pancreatitis (SAP); the rate of mortality in SAP is about 20% of all cases of acute pancreatitis. Accurate prediction of severity is important in order to improve survival. There are several assessment criteria in order to predict prognosis and severity of acute pancreatitis, which help in guiding patient triage and management. However, nothing proven to perform significantly better in clinical settings than good clinical judgment. Ideal predicting criteria should, therefore be simple, non-invasive, accurate and quantitative and assessment tests are easily available.

AIMS AND OBJECTIVES OF THE STUDY

1) To assess the accuracy of BISAP scoring system vs RANSON'S scoring system in predicting Severity in an attack of acute pancreatitis.

2) To compare predictability of organ failure, necrosis and mortality between BISAP scoring and RANSON'S Scoring system.

MATERIALS AND METHOD

SOURCES OF DATA

All patients admitted to Govt. Stanley hospital with complaints of pain abdomen diagnosed to have Acute Pancreatitis on clinical examination and further investigations.

RESEARCH DESIGN

Prospective Study

RESEARCH SETTINGS

The study will be conducted for Acute pancreatitis patients admitted to Govt. Stanley Hospital, Chennai.

SAMPLE SIZE

Sample size consists of 100 patients of acute pancreatitis.

CRITERIA FOR SAMPLE COLLECTION

INCLUSION CRITERIA

Patients with history and clinical findings suggestive of acute pancreatitis with evidence of bulky edematous pancreas on USG\ CT abdomen.

EXCLUSION CRITERIA

Chronic pancreatitis

PATIENT DATA COLLECTION AND EVALUATION

All patients who present at Govt. Stanley Hospital diagnosed as acute pancreatitis from February 2015 to September 2015.

Acute pancreatitis is defined as 2 or more of the following

- Characteristic abdominal pain.

- Increased levels of Serum amylase and/or lipase 3 times the normal value.

- Ultrasonography of the abdomen within first 7days of hospitalization demonstrating changes consistent with acute pancreatitis.

BISAP score and RANSONS score is calculated in all such patients based on data obtained within 24hrs of hospitalization and at 48 hrs.

RESULTS

In this study, the two different scoring systems (BISAP and RANSON'S) were compared and analyzed to assess the severity in patients with acute pancreatitis. An attempt also made to compare this study with previous similar studies done by others.

Acute pancreatitis found to be 10 times more common in males than females in this study. This result didn't match with previous study results , Vikesh K Singh et al (6:1), Papachristou et al (5.1:1). This could be explained by the

fact that, in this study alcohol has found to be most common etiological factor and it's more common in males.

In this study, the mean age was 41.18years which matches with the study of Sarath et al (40.8 yrs) , nearly matches with Vikesh K. Singh et al(49.6 yrs), Papachristou et al l(51.7yrs).

The mean age of non- survivors in this study was found to be 60 years as compared to survivors being 41.23 years. Taking 60 yrs of age as cut –off value, increasing age was found to be correlated well with increasing incidence of mortality. Thus age is considered as the significant contributory factor in predicting the outcome of severe acute pancreatitis.

The most common etiological factor in this study was alcohol (59%), which was more than Bidarkundi et al (46.67)%, and not correlating with results of , Vikesh K Singh et al (21.4 %), Papachristou et al (14%) wherein gall stone disease found to be most common cause, 27 and 36%respectively.

The mean length of hospital stay was 12.03 ± 6.8 days in this study. In this study, increasing BISAP and RANSON'S scores was correlated well with the duration of hospital stay.

The most common presentation was predominantly abdominal pain (95%), followed by fever (31%), vomiting(25%) and other manifestations.

In this study , 86 patients were diagnosed to have mild and moderately severe acute pancreatitis grouped under MAP, and 14 patients found to have severe

acute pancreatitis. All the 14 patients were correctly predicted by BISAP score. The scores was assessed by correlating the scores with three factors: organ failure, necrosis and mortality.

The analysis for organ faiure showed BISAP score has sensitivity of 71.43%, specificity of 95.35%, PPV of 71.43%, NPV of 95.35%, diagnostic accuracy of 92%; whereas RANSON'S score has sensitivity of 78.57%, specificity of 74.42%, PPV of 43.33%, NPV of 95.52 %, diagnostic accuracy of 88%. This correlates well with the study by Papachristou et al where sensitivity of (70.42%,80.41%), specificity of (92.4%,71.9%), PPV of (57.7%,40%), NPV of (84.3%,90.1%), for BISAP and RANSON'S respectively. Thus by using Chi^2 test, BISAP $\geq$ 3 has significant correlation with prediction of the occurrence of organ failure ($p<0.01$), which mathes well with study by Vikesh k. Singh et al and B U Wu et al.

In this study, 7/20 patients with BISAP> 3 and 8/14 patients with RANSON'S >3, developed pancreatic necrosis. The statistical analysis for the prediction of necrosis has sensitivity of (81.82%,90.91%), specificity of (94.35%,77.53%), PPV of (64.29%,43.56%), NPV of (97.67%,98.57%), diagnostic accuracy of (93%,91%) for BISAP and RANSON'S respectively. This correlates well with the study by Papachristou et al where sensitivity of (80.01%,87.65%), specificity of (95%,79.51%), PPV of (56.2%,38.9%), NPV of (84.9%,90.1%), for BISAP and RANSON'S respectively. Thus by using Chi2 test, BISAP $\geq$ 3 has significant correlation with prediction of the occurrence of organ failure

($p<0.01$), which matches well with study by Vikesh k. Singh et al and B U Wu et al.

In this study, 4 patients with severs acute pancreatitis were expired. All 4 deaths were correctly predicted by BISAP score. The statistical analysis for the prediction of necrosis has sensitivity of (100%,88.57%), specificity of (95.83%64.42%), PPV of (50%,31.33%), NPV of (100%,96.52%), diagnostic accuracy of (96%,93%) for BISAP and RANSON'S respectively. This correlates well with the study by Papachristou et al where sensitivity of (100%,100%), specificity of (95.8%,53.1%), PPV of (50%,28.1%), NPV of (100%,100%), for BISAP and RANSON'S respectively.

In this study, patients developed pancreatic necrosis, acute renal failure, MODS , septicemia,

These complications were more likely seen in patients with BISAP ≥ 3, and RANSON'S > 3, hence concluded that these are the patients in high risk group, who requires intensive monitoring and probably early intervention if necessary.

CONCLUSION

From this study, alcohol (59%) ,was found to be the most common etiological factor for acute pancreatitis.

Males were more commonly affected than females with a ratio of 10:1.

The most common age group of patients affected were in 4^{th} decade of life.

The overall mortality in patients with severe acute pancreatitis was 4%

BISAP score is equally effective in finding out the frequency of severity and predicting mortality in patients with acute pancreatitis as Ranson's score. Moreover, its components are easily available and it does not require 48 hours for completion of assessment as compared to Ranson's score. It is an accurate tool to classify patients into mild and severe disease; it is easy to perform and can be done on the bedside of patients with acute pancreatitis in every setup